

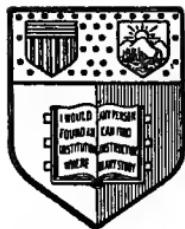
# CAKE OF INVADERS

CHEMIST, DRUGGIST, & OPTICIAN.

The MEDICAL, ENTHUSIASM, & MORAL,  
THE MEDICAL, ENTHUSIASM, & MORAL,

OF NEW YORK.

Richard A. McCook, President.



New York  
State College of Agriculture  
At Cornell University  
Ithaca, N. Y.

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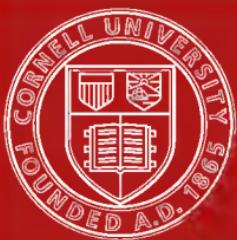
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# CARE OF INVALIDS

A MANUAL FOR REFERENCE

ISSUED BY

The Mutual Life Insurance Company  
of New York

RICHARD A. McCURDY, President

1908

PUBLISHED BY THE COMPANY

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## CARE OF INVALIDS

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To those who are lying upon beds of anguish, and possibly mortal illness, there can be nothing more comforting than the thought that a policy of insurance in THE MUTUAL LIFE INSURANCE COMPANY OF NEW YORK protects those who are dependent on them.

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## VENTILATION.

Most readers know that the bodies of animals are constantly undergoing changes; the old particles, becoming worn out and useless, are thrown into the blood and carried away, while new ones are taken from the blood and put in their places. These decaying particles, as soon as they become useless, must be carried away through the blood and out of the body. The chief means by which this end is accomplished is through the use of pure air, which washes away these impure particles from the blood. This air enters pure, through the mouth and nostrils into the lungs, and comes out laden with these poisonous materials. If these decaying particles are taken into the lungs again they not only prevent the escape of the poisonous materials from the body, but really add more poison to it. Soiled air can no more purify soiled blood than soiled water can cleanse soiled clothes. There is one thing that can do it, and that is plenty of pure air.

Now, the question is, how much pure air does it require to answer this purpose? You may have some idea of it when you remember that an ordinary man spoils not less than 3,000 cubic feet of pure air every hour. A sick person needs much more. He should never be put in a room that contains less than 1,500 cubic feet of air space, *i. e.*, it must be at least 15 feet long, 12 feet wide, and 9 feet high, allowing a little for furniture. Even then the ventilation needs to be very good.

Not only is the air of a room made impure by breathing, but is made impure by the gas we burn as a light. It is estimated that an ordinary burner consumes as much air as eleven men would use—that is, one gas-burner in

The blood is  
purified by  
fresh air.

Amount of  
air needed  
for purifying  
the blood.

**Effect of gas and stove on the air.** three-quarters of an hour consumes as much air as would answer a man for a whole night. If there is an ordinary stove in the room it destroys as much air as would twenty-five men. All these facts and estimates must be thought of when you hesitate sometimes about putting up or letting down a window a few inches.

**Do not close a fireplace.**

If the house is an old one there may be a fireplace in the room. If so, do not attempt to seal it up "because the air comes in"—as air is just the thing you want—but leave it open, or at least the greater part of it. If the house is a more modern one, there is perhaps a "flue;" if so, do not upon any excuse attempt to close it, but let it alone.

**Fresh air must enter and foul air escape.**

A great many persons have an idea that this letting in of pure air, or "ventilation," means raising a window a little from the bottom, or opening a door a short distance. They never consider into what the window or door opens—it is all the same, so they open somewhere. The idea is not correct. Ventilation not only means providing a way for the pure air to come in, but for the bad air to get out. This can usually be accomplished by drawing down the top sash a few inches, which will let the heated, impure air out of the room, and by raising the lower sash a few inches to let the fresh air into it. If you wish to know that the hot air really goes out at the upper opening, hold a lighted candle near it, when the blaze will be carried outward by the force of the escaping current; and if you will hold it to the opening below, the flame will point inward from the current of cool air which comes from without. A more certain way to secure the proper amount of fresh air is to have openings on opposite sides of the room, so that the air will circulate through the chamber as much as possible.

Remember not to have the current play over the bed

on which the person lies sleeping, as the person might catch a cold. But if there is no other way—and some rooms are so constructed that no other means appears possible—it is better to open the windows, and escape the effects of the draught by putting an extra covering over the person. Should there be only one window in the chamber, raise that and open the door a little. If you can contrive no means by which a desirable amount of pure air can be permanently secured, bear the matter in mind, and some day when your physician comes in ask him about it. Persons who sleep habitually in badly ventilated houses are seldom compelled to wait long for such an opportunity, as the physician is frequently summoned to the occupants of these houses.

If pure air is so important to people who call themselves in health, how much more important is it to those who are sick. The lungs try to throw the load off, as can be detected by the heavy odor of the breath; the skin is trying to do the same thing, as you will perceive by its sickly, clammy feeling; and a physician will see that a dozen different attempts are made in one place or another with the same object in view. These noxious materials, as they are cast off, tend to poison the surrounding air; so we must assist nature in relieving the patient by keeping a constant supply of fresh air in the chamber where he lies. Not only do we assist in curing the patient by carrying away these poisonous materials with plenty of pure air, but at the same time we greatly lessen the chances of other persons contracting disease by breathing the contaminated atmosphere.

Most observers have noticed that certain contagious diseases, as smallpox, scarlet fever, etc., are very apt to prevail during the winter. The reason is a simple one—because the poisonous or contagious principle is

Avoid a draught if possible.

Importance of fresh air to the sick.

Prevalence of contagious diseases in winter.

kept confined in the room through fear of admitting the cold, and it becomes so concentrated and virulent that it is capable of producing the disease in others. In warmer weather this prejudice against fresh air does not exist; the doors and windows are kept open, the fresh air enters in abundance and dilutes the emanations so much that they lose their power to extend the disease. These diseases then diminish until closed doors come again with the cold weather. This is not only the case in low fevers, scarlet fever, etc., but the same principle holds true with most other diseases, so that the first and last thing a nurse should do is this:

*Keep the air the sick person breathes as pure as the air outside without chilling him.*

Many persons think, as before remarked, that the right thing has been done if a door or window is opened, never minding where the air comes from, whether from a close entry, a foul kitchen or even from an untidy water-closet. If the air does come from any such place, the sick-room is not aired, but only more poisoned. The kind of air one requires is the best air of the neighborhood, and this usually comes from the outside of the house.

With plenty of open windows to let in the pure air, and a little burning fuel to take off the chill, it is an easy matter to get that kind of air which all sick persons need. It is a rare thing for a person to "catch cold" while in bed. Indeed, some physicians say they never knew a case of it from such a cause, and if the bed-clothes are properly tucked in about the shoulders it is hard to imagine how such a thing could occur, unless the air is so cold that it acts upon the lungs as it would upon the ear, nose or fingers, directly inflaming the organs of respiration as if by "frost bite."

New air  
must not be  
already foul.

Difficulty  
of "catching  
cold" in bed.

## TEMPERATURE.

Cold has been called "the great enemy of age," and as the same inability to resist death is found in the sick as in the aged, cold may be said to be the great enemy of the weak. The report of the Registrar-General of Great Britain for the cold months of the year 1875 shows that, while there was no new malady, but only the familiar forms of bronchitis, phthisis pulmonalis (consumption) and pneumonia (inflammation of the lungs)—which always hold their own in the returns of the causes of death—yet these well-known diseases were answerable for a number of victims greatly in excess of the average. Thus, where the weekly average for ten years from the three specified causes had remained about stationary during the prevalence of the cold weather of December, there was an increase of twenty-five per cent. in the death rate. The probable, or at least the only assignable, cause of this mortality was the low temperature which prevailed. This is true as to the *cause* of death; and the same authority shows that the death rate, from all causes, among persons sixty years old and upward—which previously stood at 62 per thousand of all the deaths from these causes—rose during the seven cold weeks to 130 per thousand, and during the cold weather of the last two weeks of December, 1874, rose still higher, to 150 per thousand.

While cold leads to a great mortality among the weak and aged and the very young, it cannot be doubted, on the other hand, that in warmer latitudes reliable statistics would prove that the heat of summer leads to quite as great a mortality among the aged and debilitated. Ordinary observation will satisfy anyone of the truth of this in the case of young children. Now, for practical purposes, there is little difference between an aged or a

Influence of  
cold.

Influence of  
heat.

young person and a *sick* one. Hence, because violent and extreme changes should be avoided as much as possible at the periods of life mentioned—cold proving most destructive to the aged and heat to the young—a corresponding carefulness should be observed in regard to the *sick* of every age.

The consideration of these facts naturally leads to the inquiry whether we are helpless under the conditions which they disclose; but common sense and experience fortunately show that we are not. While the susceptibility is doubtless increased by the sudden variations of temperature referred to, the question arises whether the still greater variations to which people unthinkingly expose themselves may not be quite as dangerous. In this respect an audience just leaving a hall or place of amusement is an instructive sight. It includes numbers of delicate women who dress habitually in furs and warm wraps, who have been sitting for two or three hours, with low dresses, in a heated, vitiated and relaxing atmosphere. These wait, before starting home, in a cold, draughty lobby, standing in thin shoes, and while talking and laughing with their friends take deep breaths of the raw, cold air into lungs which have been previously breathing a vapor bath. Many of these changes of temperature incident to the customs of society are of a purely artificial character, scarcely to be resisted by the strong with the best of health. The waste of health and strength is often too great for the robust, and the weak had better avoid them.

One avoidable way of catching cold.

Breathe through the nose.

Many of the illnesses deplored under this head are doubtless due to the direct shock given by the sudden entrance of a volume of cold air into the lungs, which could have been avoided almost entirely by the simple expedient of breathing only through the nostrils, and

keeping the lips closed, so that the air would have become warmed before entrance into the lungs.

The sudden changes from heat to cold do not all take place away from home. Many "colds" are due to the arrangement of private houses, which appear to be built for neither heat nor cold, and do not resist either. A person going from the house to the outside cold air has been taught to put on a coat; but a person going from one room to another has not this fear, and steps into a cold bath without warning. We say cold bath, for practically the communicating entries of the house, with gas-burners at every landing of the stairs, are as well devised a means of getting the heat from the lower rooms, where needed, to the garret, where not needed, as if specially designed for the purpose—particularly if the lower outside doors are occasionally opened. Invalids, therefore, when passing through entries and long stairways, should be as well protected as if going into cold air on the other side of the front door.

People are very apt to catch cold just after getting up from a warm bed, when the skin has become somewhat relaxed from many hours, or perhaps days, of lying there, and is rendered less capable of reaction. The same temperature which refreshes a patient in bed while protected by the bed-clothing might destroy the patient just arisen. Common sense will tell us that while we want pure air, we of course want that which cannot chill the sick person.

After all, a cold is as often the result of debility as of the direct exposure to a draught of cold air. If each individual will observe his own case the next time a cold is contracted he will find, more than likely, that it was preceded some days by lassitude, headache, more or less inability to exercise the thinking faculties with the usual

Risks within  
the house.

Invalids  
must not be  
chilled.

A cold is  
frequently  
the result of  
debility.

success, disturbed digestion, etc., etc. These symptoms all become exaggerated by a very slight exposure, and sometimes the cold appears without any remembered exposure. When the above-named symptoms appear, it is wiser to examine into their cause than to inquire what particular exposure to a draught of air gave rise to the cold. A discovery of the remote cause of the attack may place it in the power of the person to prevent a recurrence, and a judicious, generous diet and attention to fresh air will often give more relief than "Squills" and other domestic remedies of the same kind.

In many diseased conditions much less heat is produced than in health; and there is a constant tendency to a decline and ultimate extinction of the vital powers by the call made upon them to sustain the heat of the body. In such cases the patient should be carefully observed every little while, and as soon as this tendency is discovered the temperature of the body should be kept up by heat externally applied, as warm bricks, tin cans or bottles filled with hot water, etc. Such cases of decline of the heat of the body occur at all times, even in summer. This coldness, indicating a decline of vitality, is most apt to happen toward morning, at the time the effect of the preceding day's diet begins to be exhausted. Everybody knows that it is usually toward morning that we begin to suffer from the effects of cold, because the vital forces are then beginning to slacken from the want of food. If this is the case in health, it is the same in disease. Hence, from midnight until nine or ten o'clock the next morning the condition of the patient should always be carefully watched, and as soon as lack of heat is noticed the nurse should at once take means to counteract it.

Invalids  
produce less  
heat than  
the well,  
especially in  
the morning.

Tempera-  
ture of room

During the daytime the temperature of the room should be kept about 70 degrees. The night tempera-

ture should vary according to the health of the occupant. If that is good, it can be as low as 50 degrees, or even 40 degrees, without discomfort, provided the bed-covering is sufficient. If the occupant is an invalid, the temperature should not fall much below 60 degrees. It will often be necessary to stir up a little heat in the early morning to prevent too great a fall.

#### CHAMBER UTENSILS.

Nothing should ever go into the "slop-pail" of a chamber but the refuse water from the wash-basin, etc., and then it should stand no longer than necessary. *Under no circumstances whatever should the contents of any utensil used about the bed ever go into it.\**

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\* Some observations by Florence Nightingale upon these matters, in "Notes on Nursing," are given :

"The use of any chamber utensil *without a lid* should be utterly abolished, whether among sick or well. You can easily convince yourself of the necessity of this absolute rule by taking one with a lid and examining the under side of that lid. It will be found always covered, whenever the utensil is not empty, by condensed, offensive moisture. Where does that go when there is no lid?

"But never, never should the possession of this indispensable lid confirm you in the abominable practice of letting the chamber utensil remain in a patient's room *unemptied* except once in twenty-four hours—*i. e.*, when the bed is made. Yes, impossible as it may appear, I have known the best and most attentive nurses guilty of this; aye, and have known, too, a patient afflicted with severe diarrhoea for ten days, and the nurse (a very good one) not know of it, because the chamber utensil (one with a lid) was emptied only once in twenty-four hours, and then by the housemaid who came in and made the patient's bed every evening. As well might you have a sewer under the room, or think that in a water-closet the plug need be pulled up but once a day. Also take care that the lid, as well as the utensil, be always thoroughly rinsed.

"If a nurse declines to do this kind of thing for her patient, 'because it is not her business,' I should say that nursing was not her calling. I have seen surgical 'sisters,' women whose hands were worth to them two or three guineas a week, down upon their knees scouring a room or hut, because they thought it otherwise not fit for their patient to go into. I am far from wishing nurses to scour. It is a waste of power. But I do say that these women had the true nurse-calling—

## DISINFECTANTS.

An able medical lecturer in Philadelphia is in the habit of tersely saying before his class that fumigations, as a rule, act on the principle of "one stink stinking out another stink." There is a deal of truth about this. The popular idea is that they destroy filthiness. Used in the ordinary way, they can do no such thing. They only make filthiness less evident, because they make the odor, which is an indication of its presence, less perceptible. Remove the cause, and all the unpleasant effects must cease.

Fumigation  
is usually  
worthless.

Diseases  
which are  
due to  
microbes.

At the present time it is known that many diseases are caused by small living organisms, called microbes. Among these diseases are consumption, cholera, yellow fever, typhoid fever, typhus fever, diphtheria, whooping-cough, smallpox, measles, scarlet fever and several others of less importance. Each of these is caused by its

---

the good of their sick first, and second only the consideration what it was their place to do—and the women who wait for the housemaid to do this, or for the charwoman to do that, when their patients are suffering have not the *making* of a nurse in them.

"Earthenware, or, if there is any wood, highly polished and varnished wood, are the only materials fit for patients' utensils. The very lid of the old abominable close stool is enough to breed a pestilence. It becomes saturated with offensive matter, which scouring is only wanted to bring out. I prefer an earthenware lid as being always cleaner. But there are various good new-fashioned arrangements.

"A slop-pail should never be brought into a sick-room. It should be a rule invariable, rather more important in the private house than elsewhere, that the utensil should be carried directly to the water-closet, emptied there, rinsed there, and brought back. There should always be water and a faucet in every water-closet for rinsing. But even if there is not, you must carry water there to rinse with. I have actually seen in a private sick-room the utensils emptied into the foot-pan, and put back, unrinsed, under the bed. I can hardly say which is most abominable, whether to do this or to rinse the utensil in the sick-room. In the best hospitals it is now a rule that no slop-pail shall ever be brought into the wards, but that utensils shall be carried direct, to be emptied and rinsed at the proper place. I would it were so in the private house."

own particular microbe, which can be transferred to a healthy person and then start up the original disease. These microbes may be present in the dejections, in the vomit, in the expectoration, in the breath, or may be detached from the skin. In order to destroy them it is necessary to use disinfectants which will kill them. In order to be of any avail a disinfectant should remain in contact with the substance to be disinfected a sufficient length of time to accomplish the object in view, otherwise it is valueless.

Among the disinfectants the following are the most important. For convenience they will be called—

#### STANDARD DISINFECTANT SOLUTIONS.

No. 1. CHLORIDE OF LIME.—This has an odor which is quite offensive to many. It bleaches clothing readily and may even destroy delicate fabrics. A standard solution of 4 per cent strength is made by adding six ounces to a gallon of pure water.

No. 2. BICHLORIDE OF MERCURY.—Commonly known as "corrosive sublimate." This cannot be used in contact with metal, as it is precipitated. A standard solution is made in the strength of 1 to 500 by adding fifteen grains to a pint of water.

No. 3. CARBOLIC ACID.—A standard solution of 5 per cent strength is made by adding seven ounces to the gallon of water.

No. 4. SOLUTION OF CHLORINATED SODA.—Commonly called Labarraque's Solution. It bleaches vegetable colors slowly. A standard solution of this in 10 per cent strength is made by mixing it with nine parts of water.

No. 5. CHLORIDE OF ZINC.—A standard solution of this in 10 per cent strength is made by adding a pound to the gallon of water.

Standard  
disinfectant  
solutions.

**Disinfectants must be applied thoroughly.**

All of these solutions are very poisonous and must be handled with care. To leave a dish of carbolic acid in the room or to sprinkle some chloride of lime on the floor does not hurt the microbe unless the microbe happens to fall into it. Disinfectants must be applied directly and thoroughly to the microbe-carrying substance in order to do their work properly. The following rules are given for the purposes noted:

#### FOR EXCRETA.

**Disinfection of excreta.**

Mix each stool thoroughly with two quarts of No. 1, the standard solution of chloride of lime, or of No. 3, the standard solution of carbolic acid. Let it stand at least one hour with the former and four hours with the latter before emptying. For privy-vaults and cesspools, use liberal amounts of No. 2, the standard solution of mercury bichloride, or of No. 3, the standard solution of carbolic acid, and scatter plentifully over the surface chloride of lime in powder. Rub down the walls frequently with No. 3, the standard solution of carbolic acid. These measures are of especial value in cholera, typhoid, dysentery and tuberculosis. In cholera, diphtheria, yellow fever and scarlet fever all vomited material should be treated in the same way.

#### FOR THE EXPECTORATION.

**Disinfection of expectoration, especially valuable in consumption.**

This should be discharged into a cup containing a considerable quantity of No. 1, the standard solution of chloride of lime, or of No. 2, the standard solution of mercury bichloride, to each pint of which fifteen grains of potassium permanganate has been added. It should remain in this for several hours before emptying. All cloths which have been used to wipe the mouth should be burned. These measures are of great importance in

consumption, diphtheria, scarlet fever and infectious pneumonia. When it is remembered that one-seventh of all deaths occur from consumption in some of its forms, and that it is very frequently caught by inhaling dried sputum, the importance of thorough disinfection in the case of this disease cannot be too highly insisted on.

#### FOR CLOTHING AND BEDDING.

If of little value, destroy by fire. If it can be washed, boil for at least half an hour, or immerse for at least four hours in No. 2, the standard solution of mercury bichloride, diluted twice, or in No. 3, the standard solution of carbolic acid, diluted once. If it cannot be washed, expose it for two hours to a dry heat at a temperature of 230 degrees Fahr., at least. Mattresses should have the cover removed or freely opened before disinfection. In fact, it is better to destroy them and the blankets with fire.

Disinfection  
of clothing  
and bedding.

#### FOR THE PERSON.

The hands and bodies of the attendants and of convalescents should be washed with No. 4, the 10 per cent standard solution of chlorinated soda, or No. 3, the standard solution of carbolic acid, diluted one-and-a-half times.

Disinfection  
of the  
person.

#### FOR THE DEAD.

Envelop the body in a sheet thoroughly saturated with No. 1, the standard solution of chloride of lime, or No. 2, the standard solution of mercury bichloride, or No. 3, the standard solution of carbolic acid.

Disinfection  
of the dead.

#### FOR THE SICK-ROOM.

While occupied, wash all surfaces occasionally with No. 2, the standard solution of mercury bichloride,

diluted once, or No. 3, the standard solution of carbolic acid, diluted once.

**Disinfection of sick-room** After the patient has been removed, wash all the walls, floor and ceiling, and all other surfaces in the room. Then close it tightly by stuffing rags or papers in the cracks of the windows and doors. Burn in it at least three pounds of sulphur to every 1,000 cubic feet. A good way to do this is to take a washtub and put in it a few inches of water and several bricks. On the bricks place an iron pot containing the sulphur. Pour over this a pint of alcohol and set fire to it. Let the room remain closed for at least twenty-four hours. Then wash all the surfaces with No. 2, the standard solution of mercury bichloride, diluted once, or with No. 3, the standard solution of carbolic acid, diluted once, and then with soap and water. After this use quantities of fresh air and as much sunlight as possible.

**Value of disinfectants.** Do not think that this question of disinfection is of little moment. If you remember that "an ounce of prevention is worth a pound of cure," you will understand that a few cents spent for disinfectants may save you a doctor's bill and possibly a funeral. And if you use them at all, do it thoroughly. Unless disinfection is well done it is worse than useless, for it will induce a false sense of security. If you fail, do not blame these principles, but your own lack of attention to detail in carrying them out.

### CLEANLINESS.

**Lack of cleanliness in the house.**

A house may be filthy even where dirt is not anywhere to be seen. Carpets filled with dust and saturated with grease, uncleansed furniture, and old papered walls of years' standing are just as much sources of impurity to the air as a refuse heap in the

cellar. They defile the atmosphere quite as much, and more or less tend to encourage disease. Sweeping with a broom certainly can remove much dirt from a floor, but what it does not sweep out it scatters through the air, making little true improvement. After the dust "settles," the room is usually "dusted," which practically means whipping the dust from one piece of furniture to another with a bunch of feathers. It really seems that the dust had better be left alone, unless it can be removed altogether, and the only way to do this is to *wipe* everything with a damp cloth. The floor of a sick-room should really be without a carpet, or if there is one it should be well beaten before the patient goes into the room, and again well beaten and aired as soon as the patient leaves it.

Few people—no matter who they may be—have any idea of the exquisite cleanliness required in the sick-room. The smoky chimney, the dusty furniture, the utensils emptied but once a day, even in the best houses, keep the air of the sick-room constantly foul. What a person in health "may put up with" for a night only may prove a source of suffering, postponement of recovery, or even the hastening of a fatal end, to the sick person who is confined there, perhaps in one posture for twenty-four hours.

None but those who have been sick, and know from personal experience, can tell how much delicious comfort may be secured by the careful washing and proper drying of the skin. It is not the mere feeling of comfort which has been obtained, but an absolute relief to the vital powers by the removal of something which was oppressing them. Cleanliness of the skin and ventilation have much the same end in view—the removal of noxious materials from the system as rapidly as possible.

Untidiness a  
drawback  
to the sick.

Comfort to  
the sick  
from  
bathing.

The various methods of washing the sick cannot be given here for want of space; besides this, the physician is always ready to give any advice which may be needed. Care should be taken in all these operations of sponging, washing and cleansing the skin not to expose too great a surface of the body at once, as this might check the perspiration and retard the recovery from disease or renew the trouble in some other form.

In several varieties of diarrhoea, dysentery, etc., when the skin is hard and harsh, the relief to the sick person from washing with water and an abundance of soap is almost beyond calculation. In other cases, sponging with tepid water and soap will be ordered, then with tepid water alone, followed by proper drying of the skin with a warm soft towel. Sometimes, when water alone is to be used, a little vinegar added to it makes the sponging more refreshing. Of course, no one would think of using vinegar at the same time that soap is used. Bay rum or cologne is also very acceptable to the face, neck and hands of sick people, when used after sponging or bathing. If not convenient to use this, some common spirits diluted with water may be substituted.

On this subject it may be well to remark that special care should be observed in the use of water for bathing persons suffering with debility, the result of sickness or of age. In such persons it is often seen that a bath which could be used with benefit in robust health, or at a younger age, is followed by palpitation of the heart, slackened pulse, more or less vertigo, shivering, and other feelings of discomfort, which last some time after its use. In ordinary cases, it may be accepted as a good rule that whenever a bath, hot, tepid or cold, is followed by a sense of oppression or inconvenience of any kind, it has not done good, and it may be well to

**Do not chill  
the skin.**

**Various  
ways of  
bathing  
an invalid.**

**Do not have  
the water  
too cold.**

suspect its having done harm. The amount of heat required to vaporize moisture is much larger than is popularly supposed, and if the person, aged or sick, or both, has not the surplus of heat to spare for the special purpose, over and beyond what he is likely to need for the ordinary purposes of the body, more or less disastrous results are invited from the reckless expenditure. Even healthy persons, accustomed to a morning bath of cold water, sometimes feel an instinctive repugnance to it, and on such occasions this should not be disregarded, but some other form of bathing used. A sponge bath or a warm bath in a well-heated room will answer better, followed by drying with a warm soft towel.

By *age* the writer does not mean the number of technical years the person has lived, but refers rather to the effect which the work he has done has had upon the "constitution," as it is called.

### LIGHT.

A dark house, wherever found, is always an unhealthy one as well. Want of light discourages growth, promotes scrofula, encourages "consumption," and, in fact, everything else which is bad. It is the unqualified experience of all who have had opportunities of judging that light is second only in importance to fresh air; and the next worse thing after a close room is a dark one. Many suppose that it is upon the spirits only that sunlight acts, and not upon the body. The reverse is the case. It does the body good, and the brighter spirits show it.

If possible, the sick-chamber should be the sunniest room in the house, and if the bed can be so placed that the person lying on it can see a good piece of the blue sky, so much the better will it be. If the patient can see out of two windows instead of one, he will be twice

Importance  
of light.

Great value  
of sunshine  
in sick-room

as well off. It is found in all hospitals that rooms facing the sun have fewer deaths, all other things considered, than such as are upon the shady side of the house; and where statistics have been kept for a period of years it is found that the average time for recovery is less upon the sunny side than upon the shady side of the building. Not only do fewer patients die, perhaps, in the southerly exposed sides of hospitals, and not only do sick people get well there faster than on the northern exposure, but it has been shown recently that in asylums, prisons, etc., more of the inmates who are compelled to dwell on the shady side of the building become ill than of those who live on the sunny side.

The first time the reader of this passes through the ward of a hospital let him observe how almost all the patients lie with their faces turned toward the light. Ask one of them why he does so, and he will scarcely be able to give you an answer; but you see he does it. The reason is deeper down than his understanding. It is his nature to do so, just as it is the nature of plants always to make their way toward the light, while their leaves or flowers incline toward the sun. While you are looking at the faces turned toward the sunlight, count how many sick you see lying with their faces toward the wall. Among a hundred patients not more than half a score will be seen avoiding the light.

#### REST.

**Effect of  
noise on an  
invalid.**

The loudness of a noise often does not hurt a patient. The putting up of a scaffold nearby, perhaps, will not trouble him—he knows what that is; while whispering or talking may annoy him beyond endurance. To some, however, any kind of noise is disturbing. A sharp and sudden noise, which is not steady, usually gives more

distress than other kinds. Anything which suddenly awakens a patient out of his sleep will throw him into greater excitement, and consequently do him more harm, than any continuous sound, however loud it may be.

*When a patient sleeps, never under any circumstances let him be awakened, unless you have the sanction of the physician.* A sick person who has been asleep but a little while, and is then awakened, can very seldom go to sleep again; while had he slept a few hours and then been aroused, he might have fallen asleep again in a few minutes with little effort. The reason is something like this: In a sick person the brain, as a usual thing, is weakened and debilitated like the other parts of the body and needs strengthening. It gets this by sleep, which is rest. If rest is interrupted a few minutes after it begins, the brain is weakened so much the more, and tends the less to sleep. The brain, therefore, not only loses the good of the little sleep it has had, but also its ability to sleep, the patient becoming what physicians call "irritable." If a patient sleeps for a time, the brain becomes so much the stronger, and can the more readily rest the next time.

No noise which excites a patient's expectation should be made in his room. Hence no one should ever speak in low tones near the bed of the patient, or hold a conversation in a room or passage where the sick person can occasionally overhear a word. This is absolutely cruel.

Another thing is frequently done by a thoughtless nurse. When she wishes to make some special inquiry of the physician in regard to the condition of the patient, she usually remains in the room until the physician is ready to leave it and then states, with an air of conscious importance, that she has "something particular" to ask him about the patient.

Do not  
waken a  
sleeping  
patient.

Do not  
whisper  
before a  
patient.

## NURSES.

The tact and qualities needed in the sick-room are not always the result of experience, nor do amateur nurses always possess them. Now and then a woman is born to them, and the physician to that house rejoices exceedingly; for his own credit, as well as the recovery of the patient, is probably assured. He seldom, however, has this good fortune, because geniuses are not common. Many nurses cannot observe, and they will not think. The fire is alternately half extinct and blazing up the chimney. It is not warm at sunrise and sunset, and moderate at midday, when the sun shines warmly. No care is taken to continue a priceless sleep by keeping the cinders from falling on the unprotected fender, or to restore the fire quietly by gently putting on lumps of coal previously wrapped in pieces of damp paper, ready for noiseless use. The desired morning meal is brought in after the patient has passed from appetite to faintness. More than likely the tea is smoked. It is painful to see a patient in the hands of such a careless nurse.

Affection only, however warm, will not qualify a sick-nurse for her position. The cool head and steady hand of a professional stranger are often to be preferred. Many a life has been sacrificed by ignorance, stupidity or anxiety of the affectionate nurse, who undoubtedly would have gladly died to save the patient.

A good nurse should have keen perceptions and the refined ways of a lady, and at the same time she should not be above supplying all the patient's needs. She should never talk of the dying agonies of her last case, or relate any of her previous cases, whatever they might have been. She should be able to judge when the patient must be kept quiet and when he may see a friend. Such a person, without giving offense, must assume the

Amateur  
nursing  
usually a  
failure.

Affection  
not a  
substitute  
for experi-  
ence.

responsibility of forbidding the discussion of worrying household troubles in the sick-room, and the responsibility, likewise, of getting rid of a visitor who has stayed too long—especially if the visitor belongs to that class of persons who seem to delight in telling the patient how someone else with the same symptoms had recently died in extreme convulsions. The lugubrious countenance assumed by such a visitor to harmonize with her conceptions of importance usually confirms the fears of the sick person to a remarkable degree, and the nurse has increased labor in quieting the apprehensions thus cruelly excited. Conversations upon any subject should never be held just outside the chamber door, where a word now and then can be overheard by those in the room; and, as intimated, what is overheard, with what is suspected, by the poor patient is frequently the beginning of the worst. Remember always that a cheerful face "doeth good like a medicine."

Never, under any circumstances, ask within hearing whether the physician does not think the patient worse, or ask the physician his opinion as to the result of the disease. Indeed no question or reply calculated in any way to suggest an unfavorable issue should, under any pretext, be indulged in before the patient. There is a good deal of human nature even in sick people.

A trained nurse commences her arrangements for the night *before* the patient begins to grow sleepy. She knows that arranging the pillows, moving the chairs, stirring the fire, and making up her own bed disturb the rest of the sick person. Sometimes an amateur does not think of this, and is surprised because the patient lies awake all night. A good nurse will also see in advance that nothing from downstairs likely to be needed before morning has been omitted.

Tact of a  
trained  
nurse.

Do not ask  
the  
physician  
about the  
patient in  
his presence.

Make all  
arrange-  
ments for  
the night  
early.

**Do not read  
much to a  
patient.**

It is the experience of most nurses that when a person is too sick to read he is too sick to listen to the reading of anyone else. If you do read, let it be done slowly, distinctly and steadily. Sick people almost always prefer having a thing told to having it read to them.

**Do not let a  
patient read  
much.**

The eyes of the convalescent and debilitated are easily injured by use. The greatest care should be taken, therefore, to use them as little as possible before recovery. Quite aside from the patient's strength, the usual absence of the necessary amount of light for reading purposes makes reading in a sick-room almost as dangerous to the sight as the use of print in the growing twilight—well known to be peculiarly destructive to the vision.

**Make some  
variety in  
the sick-  
room.**

No one but an old nurse, or a person who has been ill for a long time, can possibly know what a weary, dreary thing it is to be confined to the same room for a great while, and see no change in anything about it. It will be found that the majority of cheerful patients are those who are not confined to a single room, and the majority of depressed cases will be seen among those subjected to a long monotony of objects surrounding them. The nervous system really appears to suffer as much from want of change as the digestive organs would from continuance upon a single diet—for instance, the soldier, from his "three years or during the war" of boiled beef. Unless a person has been sick, and has learned from personal experience, he can scarcely realize what a pleasant thing it is to see beautiful objects and brilliant colors while recovering from illness. Such cravings are termed "fancies" by some; but, no matter what they are called, these indications are always valuable and should never be disregarded. The senses of sight and hearing require natural and innocent gratification as much as the stomach demands appropriate food. It is a helpful satisfaction to

indulge them, and it should be done. If the indulgence makes the sick person get well the faster, a wise nurse will observe these "fancies" and make them assist convalescence.

It is a popular prejudice that plants and flowers should not be tolerated in the sick-room, "because they give off carbonic-acid gas, which is poisonous." So they do give off this gas, and the gas is poisonous; but the quantity of carbonic-acid gas given off from half a dozen bunches of flowers in half a dozen nights would scarcely equal the amount of the same gas given off from a couple of bottles of mineral water. The odor of certain flowers, as lilies, hyacinths, etc., is unpleasant to some people, and whenever such is the case the objectionable ones should, of course, be avoided in the selection. A judicious variety in the colors should always be sought, and it may be well to remember that scarlet is rather stimulating in its effects, while blue is rather soothing.

In convalescence, even more than in illness, the attentions of an inexperienced nurse are often trying to an invalid. If he has been well nursed, he may still be amenable to the discipline of the sick-room, and will probably do what he is bid. If he has not learned to do as told without question, he has still many things to learn before he gets well. At first, perhaps, he will be allowed to sit up hours, when minutes were the physician's orders. He is able to persuade the nurse to give him a tumblerful when a wineglassful was allowed. He is allowed to see a newspaper for a few minutes, and he reads an exciting novel. He is permitted to see a visitor, and has a roomful of company. He leaves the house for the first walk, muffled up, and is allowed to sit on a cold garden seat. Upon returning home exhausted, there is no nourishment ready for him, and probably the *warmed* clothing is taken off to put on his *cold* house suit.

Plants and  
flowers may  
be allowed.

Risks during  
convalescence.

## FOOD.

**A little food at a time.**

*A little food at a time and often repeated* is the general rule for sick people. Frequently, where a physician orders beef tea, or something of the kind, a nurse will try to give a cupful every three or four hours. More than likely the patient's stomach rejects it, whereas, had a tablespoonful been given every half hour or so, it would have been retained, digested and have done the patient the intended good.

**A little food early in the morning.**

The majority of weak patients are unable to take food of any solid kind before eleven o'clock in the morning, and before that time comes around they are sure to be pretty well exhausted. This would not be so apt to occur if a spoonful of beef tea, of wine and arrowroot, of whiskey punch, or of whatever stimulant has been ordered by the physician, could be given them every hour or two from the early morn until then. Perhaps by noon, or even sooner, they might be able to eat food as substantial as a mutton chop or a piece of nicely broiled beefsteak. If food as solid as these cannot be taken, of course the nurse will persevere in the use of beef tea, prepared milk, or whatever else the physician has ordered.

**Dangers of alcoholics.**

In regard to this, it may be well to make a few remarks about the use of brandy, whiskey and other stimulants for the sick. They are always easily obtainable, and therefore oftenest used. But where there is any hereditary tendency to the use of such things, where the individual has ever shown a disposition to use them as a beverage, or where the associations of the person in the future may peculiarly expose him to solicitation, none of these stimulants, under any consideration, should ever be ordered unless there is absolutely no alternative. This is said because in many instances substitutes can easily be found by the physician.

The susceptibility of the very young to all forms of alcoholic stimulants must also be remembered. Where we would give a tablespoonful of whiskey or brandy every three or four hours to an adult, a child of two would get ten drops every hour or two; a child of five a teaspoonful every two or three hours. If we are not careful, we are very apt to overstimulate a child.

Never leave the patient's food untasted by his side, from meal to meal, in the hope that he will eat it. He never does eat it, and you only add disgust to his distaste by leaving it in sight. Let the food be brought at the right time, and if it is not eaten be sure to take it away in a little while.

A sick person's plate should never be overloaded with food, nor should he ever see or smell the food prepared for others. While eating, the patient should be left alone as much as possible.

Whatever is prepared for the sick must always be of the first quality, and cooked with the greatest care. Remember that sick-cookery should at least do half the work of the patient's weak digestion.

Always keep your patient's cup and saucer perfectly dry, so that no drops of liquid will fall on the sheets, pillow or dress. As a rule, nurses have no idea what a difference this minute want of care makes to the comfort and even willingness of the sick to take food.

Florence Nightingale says on this subject that one of the most common errors among women in charge of the sick, respecting sick diet, is the belief that beef tea is the most nutritive of all articles. "Now just try," she says, "and boil down a pound of beef into beef tea, evaporate the water, and see what is left of your beef. You will find that there is barely a teaspoonful of solid nourishment to half a pint of water in beef tea." There

Susceptibility of the young to alcoholics.

Do not leave a patient's food by his side untasted.

Do not overload the plate.

The best of food and cooking.

Keep the cup and saucer dry.

Beef tea is of little value.

is, nevertheless, a certain nutritive value in it, as there is in tea. It may safely be given in almost any inflammatory disease, but it should never be alone depended upon, especially where much nourishment is needed.

**Do not overrate the value of eggs.**

Again, it is an ever-ready saying that "an egg is equivalent to a pound of meat," whereas this is not so at all. Much trouble has occurred from this mistaken notion. It is a question whether, weight for weight, eggs are equal to beefsteak. Also, it is seldom noticed with how many patients, particularly those of nervous or bilious temperament, eggs disagree. Most puddings made with eggs are distasteful to them in consequence. An egg whipped up with wine is often the only form in which they can take this kind of nourishment.

**Meat alone may produce scurvy.**

Again, if the patient is able to eat meat, it is supposed that to give him meat is the only thing needful for his recovery ; whereas scorbutic (scurvy) sores have been known to appear among sick persons living in the midst of plenty, which could be traced to no other source than this—namely, that the nurse, depending on meat alone, had allowed the patient to be without vegetables for a considerable time, these latter being so badly cooked that he always left them untouched. To all intents and purposes he really had no fresh vegetables at all.

**Animals require albumin, starch,**

Animals require in their food an albuminous constituent, a starchy one, and another of fat. The first, or albuminous (the purest form of which is the white of an egg), enters largely into the formation of the human body, the muscles being chiefly composed of it.

The second, or starchy component, does not enter into the structure of the body as such, but is converted into sugar during digestion, and has much to do with the formation of the tissues and heat.

The oily parts enter largely into the composition of the

brain, nerves, and in fact all other portions of the body, and, when broken up and consumed, supply a good portion <sup>fat,</sup> of the fuel for heat of the body.

Besides these three mentioned, which are most conspicuous, there are other substances, as common salt, phosphates, iron, etc. These are supplied through food, but our space will not permit more than a mere reference. All food must contain these substances in proportionate quantities. If it does not, the appetite craves the one missing, and if not properly supplied, the part of the body which needs the deficient component suffers.

To feel assured of this, if the reader thinks a moment, he will remember that no one likes bread alone, but wants with it some butter, which supplies the oily part, and the appetite craves, too, a piece of meat, cheese, or an egg—the albuminous part. We want butter with our rice or potatoes, because rice or potato is almost pure starch, and wanting in fatty matter; so nature says we must add the wanted parts.

As all food which properly sustains man must contain these principles, it will be readily seen that those vegetable substances which are composed of but one of them, or even two, cannot alone support life. Experience confirms this view. Oils or fat are useful as oils or fat, but cannot supply the place of starch or sugar; nor can starch or sugar supply the place of albumin or flesh.

To obtain all these needful constituents we must seek a variety in our food, and not depend exclusively upon any single one for continued use. There are some apparent exceptions to this rule, as in the case of milk, which we know is capable, under certain circumstances, of sustaining life for a length of time; but when we examine into the matter the exception is only apparent, for milk contains all of the constituents necessary for

<sup>and salts.</sup>

All should  
be present  
in the food.

Life cannot  
be sustained  
on one or  
even two.

Great value  
of milk.

perfect food. It has the starchy part advanced a step into the shape of sugar, the albuminous part as the cheesy constituent, and the fatty as the creamy element. Hence milk can be taken as a sort of representative diet, and one better adapted to sustain the body in health, or to strengthen it in sickness, than any single article of food.

Flour made from wheat, meal from oats or Indian corn, grits, etc., come next in order, perhaps, and stand at the head of the list of all articles of food grown for general consumption. Food of the above description is made up chiefly of starch, some albumin (under the form of gluten), and a certain amount of oil. Hence, bread made of flour may well be called the "staff of life," because, from containing these elements, it is capable of supporting life by itself for a longer time than any other single article of food, excepting milk, as mentioned above. But, though containing these essential elements of life, flour without the addition of albuminous or oily matter to a certain degree cannot long properly sustain the human body.

If flour cannot nourish the body in a proper manner, it will at once be seen that cornstarch, arrowroot, tapioca, and the like—which are nothing but pure forms of starch, made by washing away the oily and glutinous (albuminous) parts—cannot possibly be expected, when used alone, to afford more than a limited amount of nourishment; not, of course, as much as food prepared from flour which has in it the deficient articles. Not only is flour more nutritive than arrowroot, or any preparation of starch, but it is less liable to ferment, and, as a rule, it should be preferred whenever it can be used.

Do not misunderstand what is meant. None of these articles, compared with flour, are spoken of as useless to the body; but some preparations for the sick must be

Value of  
flour and  
cereals.

Value of  
starches.

more useful than others, because they contain more of the elements of usefulness in the shape of albumin, starch, oil, etc.

But if fresh milk is so valuable a food for the sick, the least sourness in it makes it, of all articles, perhaps the most injurious. Diarrhoea is a common result of fresh milk allowed to become at all sour. The nurse, therefore, ought to exercise the utmost care in this particular. Yet if you consider that the only drop of real nourishment in your patient's tea is the drop of milk, and how much all patients depend upon their tea, you will see the great importance of not depriving your patient of this milk.

The desire shown by the sick, and especially by those who are getting well, for acid fruits, as oranges, baked apples, cranberries, lemons, etc., should never be disregarded. The important use the acids of fruits play in the body is a long story; so we can only insist upon the importance of regarding these "cravings" wherever found. Sometimes the physician has good reasons for not wishing them given, as the acid may neutralize or decompose some remedial agent employed, but as a rule these fruits, properly prepared, may not only be given without injury, but with decided benefit. So, whenever a sick person has a craving for such things, be sure to call the physician's attention to it, and ask if you can give them.

Calves-foot jelly is another article of diet in great favor with nurses and friends of the sick. Even if it could be eaten solid, it would not nourish. It is simply the height of folly to take one-eighth ounce of gelatine and make it into a certain bulk by dissolving it in water, and then to give it to the sick, as if the mere bulk represented nourishment. It is not generally known that jelly does not nourish, that it has a tendency to produce

Milk should  
be very  
fresh.

Acid fruits  
are often  
grateful.

Jelly con-  
tains almost  
no nourish-  
ment.

diarrhoea, and to trust to it to repair the waste of a diseased constitution is simply to starve the sick under the guise of feeding them. If one hundred spoonfuls of jelly were given in the course of the day, you would have given one spoonful of gelatine, which spoonful has scarcely any nutritive power whatever.

Dr. Christison says that "everyone will be struck with the readiness with which certain classes of patients will often take diluted meat juice or beef tea repeatedly when they refuse all other kinds of food." But beef tea as ordinarily made is really only a stimulant, very much like coffee. To make a beef tea that contains considerable nutriment, as well as stimulant, cut a thick piece of good, juicy steak into lumps about the size of a small lemon. Broil each piece slightly and then squeeze it thoroughly in an ordinary lemon squeezer, or, better still, in one of the small meat-presses that are made nowadays for this purpose. You will not get a great deal of juice, but it is a fair nutriment for the sick. It can be served hot or cold, with salt and pepper to suit.

A great deal too much is said against tea\* by wise people, and a great deal too much tea is given to the sick by foolish people. When, however, you see the natural and almost universal craving in the sick for their "tea," you cannot but feel that nature knows what she is about.

Value of tea  
and coffee.

\*Persons about to incur great exhaustion, either from the nature of the service or from their being not in a state fit for it, are frequently advised to eat a piece of bread. I wish the recommenders would themselves try the experiment of substituting a piece of bread for a cup of tea or coffee or beef tea as a refresher. They would find it a very poor comfort. When soldiers have set out fasting on a fatiguing duty, or when nurses have to go fasting to their patients, it is a hot restorative they want, and ought to have, before they go, and not a cold bit of bread. If they can take a bit of bread with the cup of hot tea, so much the better, but not instead of it. The fact that there is more nourishment in bread than in almost anything

But a little tea or coffee restores them quite as much as a great deal ; and a great deal of tea or coffee impairs the little power of digestion they have. Yet a nurse, because she sees how one or two cups of tea or coffee restores her patient, often thinks that three or four cups will do twice as much. This is not the case at all ; it is, however, certain that there is nothing yet discovered which is a substitute to the patient for his cup of tea ; he can take it when he can take nothing else, and he often can take nothing else if he has not tea. It would be very desirable to have the detractors of tea point out what to give to a patient after a sleepless night instead of tea.

If you give it at five or six in the morning, the patient may even sometimes fall asleep after it, and get, perhaps, his only two or three hours' sleep during the twenty-four. At the same time, you never should give tea or coffee to the sick, as a rule, after five o'clock in the afternoon. Sleeplessness in the early night is usually due to excitement, and is increased by tea or coffee ; sleeplessness which continues to the early morning is often from exhaustion, and is relieved by tea.

But do not  
give too  
much.

When to  
give tea or  
coffee.

### BEDDING.

In looking for an example of what not to do, we may take the specimen of an ordinary bed in a private house ; a wooden bedstead, two or even three mattresses piled

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else has probably induced the mistake. That it is a fatal mistake there is no doubt. It seems, though very little is known on the subject, that what "assimilates" itself directly, and with the least trouble of digestion, with the human body, is the best under the above circumstances. Bread requires two or three processes of assimilation before it becomes like the human body. The almost universal testimony of men and women who have undergone great fatigue, such as riding long journeys without stopping, or sitting up several nights in succession, is that they could do it best upon an occasional cup of tea—and nothing else.

Let experience, not theory, decide upon this as other things.

up above the height of a table, with a valance attached to the frame. Nothing but a miracle could ever thoroughly dry or air such a bed and bedding. The patient must certainly alternate between cold damp after his bed is made and warm damp before, both saturated with organic matter,\* and this from the time the mattresses are put under him until the time they are picked to pieces, if this is ever done.

Consider that an adult in health exhales by the lungs and skin, in the twenty-four hours, one or two pints of moisture, loaded with organic matter ready to enter into putrefaction—that the quantity in sickness is often greatly increased and the quality always more noxious—and ask yourself where does all this moisture go? Chiefly into the bedding, because it cannot go anywhere else. It stays there, because, with the exception of a weekly change of sheets, scarcely any other airing is attempted. A nurse will be careful to fidgetiness about airing the clean sheets because of their dampness, but airing the used sheets because of noxious damp will never occur to her. Besides this, we know very dangerous effluvia arise from the excreta of the sick. These are placed, at least temporarily, where they must throw their effluvia into the under side of the bed, and the space under the bed is never aired; it cannot be with lack of proper facilities. Must not such a bed be always saturated, and be always the means of introducing again into the body of the unfortunate patient who lies in it that poisonous matter which nature is trying to get out of the system?

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\*For the same reason, after washing a patient, if you must put the same nightdress on him again, always give it a preliminary warming at the fire. The nightgown he has worn must be, to some extent, damp. It has now become cold from having been off him for a few minutes. The fire will dry and at the same time air it. This procedure is much more important than with clean things.

If a bed is higher than a sofa, the patient often prefers not to get out at all, rather than undergo the fatigue of getting out. Were the bed a low one, he might often feel like taking a few minutes' exercise every day in another room, or even in the open air. It is very odd that people never think of this, or of how many more times a patient who is in bed for twenty-four hours is obliged to get in and out of bed than are those who only get into bed and out of bed once during the twenty-four hours.

A patient's bed should always be in the lightest spot in the room; and he should be able to see out of a window.

It is scarcely necessary to say that the old four-post bed with curtains is utterly inadmissible. Hospital bedsteads are in many respects very much better than private ones.

Never use anything but light blankets as bed-covering for the sick. The heavy cotton impervious counterpane is bad, for the very reason that it keeps in the emanations from the sick person, while the blanket allows them to pass through. Weak patients are invariably distressed by a great weight of bed-clothes, which may prevent their getting any sound sleep whatever.

One word about pillows. Every weak patient, be his illness what it may, suffers more or less from difficulty in breathing. To take the weight off the poor chest, which at best is hardly up to its work, ought therefore to be the object of the nurse in arranging his pillows. Now, what does she usually do, and what are the consequences? She piles the pillows one upon the other like a wall of bricks; the head is thrown upon the chest, and the shoulders are pushed forward, so as not to allow the lungs room to expand. The pillows, in fact, lean upon

Bed should  
be low and  
near the  
window.

Coverings  
should be  
light.

How to  
arrange  
pillows.

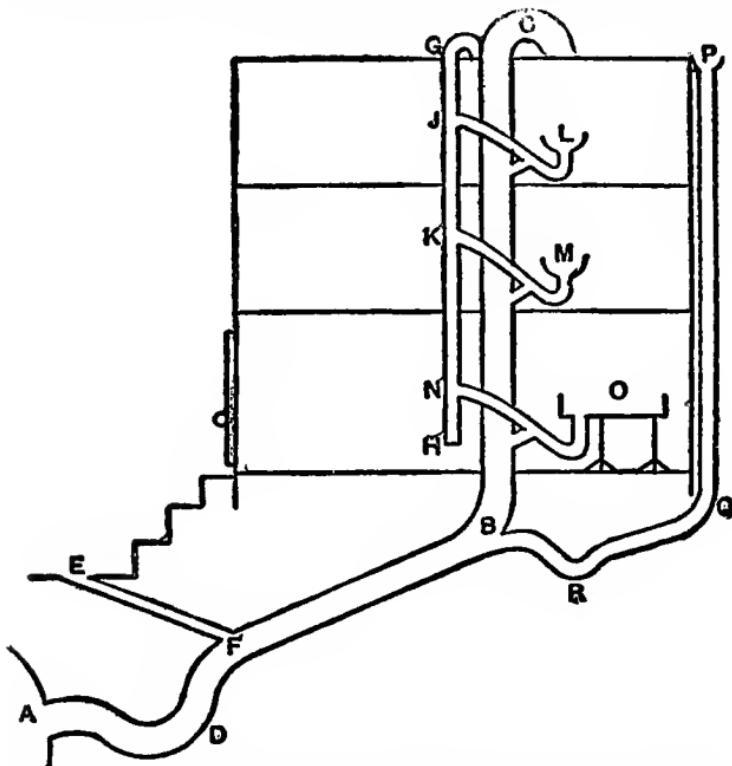
the patient, not the patient upon the pillows. It is impossible to give a rule for the arrangement of pillows, because it must vary with the figure of the patient. Tall patients suffer much more than short ones, because of the drag of the long limbs upon the waist. But the object is to support, with pillows, the back below the breathing apparatus and above the hips, so as to allow the shoulders room to fall back, and to support the head without throwing it forward. The suffering of exhausted patients is greatly increased by neglect of these points. And many an invalid, too weak to drag about his pillows himself, slips his book or anything at hand behind the lower part of his back to support it.

#### DRAINAGE.

This should be constructed so as to keep out of the air of the house any admixture of sewer gas, but it often fails entirely, owing to incorrect or defective plumbing. The danger is not so much from the sewer gas itself as from the germs of disease which may be present. These are not volatile, but are sprayed up into the air of the sewer by the breaking of bubbles on the surface. Their weight is so light that they are carried about by the air-currents. In order to prevent disease from this source the house must be properly plumbed. To do this the soil-pipe should open on the roof, and every trap should be back-aired. The diagram on the following page shows these points.

Besides the conditions enumerated, which are absolutely essential, there are some others which it is well to bear in mind. The soil-pipe should be of iron and 4 inches in diameter. After it changes from the perpendicular it should have a slope of 1 in 30, so as to insure a current of at least  $4\frac{1}{2}$  feet per second. The traps should be the

S-shaped siphon traps, preferably without pans or hoppers, but flushing directly. The water-closets should not

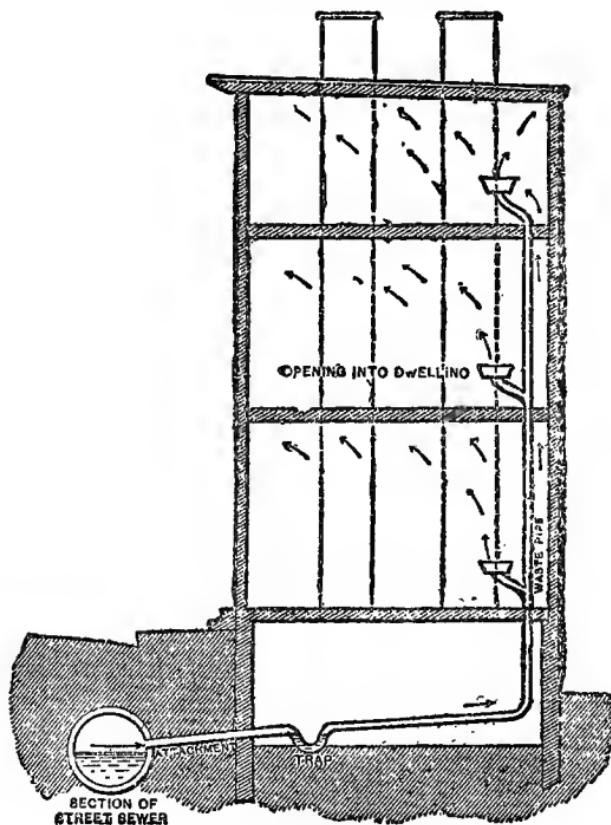


**A** is the sewer. **A B C** is the soil-pipe, opening on the roof at **C**, and trapped at **D**. **E F** is the ventilating-pipe, communicating with the soil-pipe just behind **D**. **G J K H** is the ventilating-pipe to the traps, opening on the roof at **G** and giving off branches at **J K** and **N** to the traps of the fixtures **L M O**, which branches are connected on the soil-pipe side of the traps as indicated. **P R** is the leader from the roof, connected with the soil-pipe at **B** and trapped at **R**. The object of **E F** is to have a constant current of air blowing through the pipe. The air in **B C** being within the house, becomes heated and escapes through **C**, while fresh air enters through **E F**. The object of **G H** and its branches **J K N** is to prevent siphoning of the traps by an action similar to that of a Sprengel air-pump.

\* (The engraver has made all the traps in the diagram too shallow except at **R**. They should be so deep as to divide the U-shaped column of water into two distinct limbs, connected only at the bottom.)

communicate directly with the house-tank, but with small waste-preventer tanks, which are filled automatically from the house-tank.

It is impossible for sewer gas to enter a house plumbed in this way. But oftentimes many of these precautions are neglected, and the results are quite graphically shown in this diagram:



# The History of Life Insurance in America

I S T H E  
HISTORY OF

## The Mutual Life Insurance Company OF NEW YORK

RICHARD A. McCURDY, PRESIDENT

---

The Oldest Active Company in the United States

The Largest in the World—————

Its Assets, larger than those of any other life  
insurance company in existence, are over

**\$380,000,000**

It has paid Policy-holders over—————

**\$590,000,000**

which is more than any other life insurance  
company in the world has disbursed—————

How the largest accumulation of trust funds in  
the world is invested is told in "A Banker's  
Will," sent on request—————

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**The Mutual Life Insurance Company**  
OF NEW YORK

RICHARD A. McCURDY, President  
Nassau, Cedar, William and Liberty Streets, New York City

# *The Mutual Life*

*Insurance Company of New York*

*Richard A. McCurdy, President*

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*THE LARGEST IN THE WORLD*

*Assets over*

*Three Hundred and Eighty Million Dollars*

*and growing at the rate of twenty-seven  
million dollars annually*

*Amount paid policy-holders, over*

*Five Hundred and Ninety Million  
Dollars*

*Annual income, over*

*Seventy Million Dollars*

*The oldest active Life Insurance Company in the  
United States. Founded Sixty years ago, 1843*

*A Purely Mutual Company whose assets  
are the property of its policy-holders*

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***The Mutual Life Insurance Company***

***OF NEW YORK***

***Richard A. McCurdy, President***

***Nassau, Cedar, William and Liberty Streets, New York, U. S. A.***

# New-York Daily Tribune.

WEDNESDAY, NOVEMBER 12, 1902.

## A REMARKABLE INVESTMENT.

MOUNT VERNON MAN'S WIDOW GETS A \$1,000  
ANNUITY—ONLY \$2,095 20 HAD BEEN  
PAID FOR IT.

The story of one of the most unusual and successful investments of recent years has just come to light. The late John C. Tichenor, of Mount Vernon, by paying out a total sum of \$2,095 20 secured to his widow an annual income of \$1,000 for all the days of her life. Mr. Tichenor was president of the Globe Publishing Company, at No. 111 Fifth-ave., New-York City, and began his business career in Terre Haute, Ind.

It was in the early part of 1899 that, then thirty-nine years old, he decided to take out a life insurance policy. He investigated thoroughly the old line companies with their policies, payable in a lump sum to the beneficiary on the death of the "party of the first part." He looked into the claims of the secret societies with their benefit proposals. And finally it was called to his attention that the Mutual Life Insurance Company, of New-York, was offering a newly devised style of policy, which combined the orthodox advantages of oldtime insurance methods with certain modern emendations. But their policy, while attractive, was yet distinctly a business proposition, on a sound basis, with no possibility of risk or loss. On August 7, 1899, Mr. Tichenor signed the application and paid his first quarterly premium of \$174 60. For the three succeeding years he continued to pay his premiums at the rate of \$698 40 a year. In September of this year he died.

The Mutual Life Insurance Company at once began payment of the policy at the rate of \$1,000 a year. His widow, who lives at No. 130 Washington-st., Mount Vernon, will continue to receive that amount yearly until her death. If that occurs within twenty years her heirs will receive the difference between \$20,000 and what has already been paid to her at the rate of \$1,000 a year, the original policy having been written for \$20,000.

## GEO.H.DANIELS AS A PROPHET.

**General Passenger Agent of the New York  
Central Gave Advice to a Mechanic,  
Enabling Him to Go Into Business  
and Become A Rich Man.**

*(Special Telegram.)*

NEW YORK, N. Y., March 11, 1902.

George H. Daniels, General Passenger Agent of the New York Central and Hudson River Railroad, President of the Sphinx Club, and one of the best-known railroad men in New York City, says that one of the happiest recollections of his life is the story of an endowment policy which he induced a mechanic in the Mallory Iron Works, of Elgin, Ill., to take out in 1865. "I was then an agent of The Mutual Life Insurance Company of New York," he says, "and, having won the confidence of this young man, I induced him to take out an endowment policy, payable in twenty years, telling him that the money might come in handy if he ever had a chance to buy into the business. It happened that just when the policy fell due Mr. Mallory wanted to retire from business, and with the money received from his Mutual Life policy, my young friend was able to make a cash payment on the purchase, bought the business, and is to-day a rich man."

"I know of many similar cases in Kane County, Ill., where those who took out policies in The Mutual realized handsomely on their investment during their life time."

"I have myself held a policy in The Mutual for over forty years."

*From Boston Herald.*

# **5% Gold Bonds**

with interest payable semi-annually in gold coin, can be purchased on the instalment plan, under a contract devised and introduced by

## **The Mutual Life Insurance Company of New York**

---

**RICHARD A. McCURDY, President**

In case of your death during period of payments, the bonds become at once the property of your beneficiary.

If you wish to know terms on which these bonds are offered address, stating your age and the amount of income you would like to begin drawing twenty years hence,

**The Mutual Life Insurance Company**

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**OF NEW YORK**

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**RICHARD A. McCURDY, President**

# Courier-Journal.

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Published Daily, Sunday and Semi-  
Weekly.

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Office Cor. Fourth Ave. and Green St.  
LOUISVILLE, KY

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THURSDAY.....JUNE 19, 1902

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## Lord Pauncefote's Insurance.

New York, June 18. — Lord Pauncefote, the Ambassador of the British Government to the United States, was quite heavily insured in the Mutual Life Insurance Company of New York, and the claim was, of course, immediately paid upon his death. He was not insured in any other American company, but held policies issued by the best-known English institutions.

# Boston Transcript

WEDNESDAY, JULY 23, 1902

## Its List Warmly Commended

One of the most notable tributes ever paid to a great business corporation was that of the late Frederick D. Tappen of New York to The Mutual Life Insurance Company of New York. It was, in the words of the Hon. Levi P. Morton, "particularly impressive in that it is the expression of a judgment ripened by half a century's study of investment securities." Frederick D. Tappen, president of the Gal-latin National Bank of New York and for the last fifty years a conspicuous figure in the banking world, died last February. In the last clause of his will Mr. Tappen pro-vides for certain trusts, and instructs his executors and trustees to invest the pro-ceeds of his estate only in securities "in-cluded in the list of investments made by The Mutual Life Insurance Company of New York, not limiting my said executors and trustees or their successors or suc-cessor to such investments only as trustees are by law authorized to make." The pecu-liar import of this provision will be understood by those familiar with Mr. Tap-pen's career and the conservative policy under which the investments of The Mutual Life Insurance Company of New York are made. This provision in Mr. Tappen's will is certainly a glowing tribute to fifty-nine years' conservative administration of the largest accumulation of trust funds in the world. Mr. Elbridge T. Gerry, a director of the company, in writing of it, said: "Compliments from the living are often in-sincere—those from the dead, never." It is of interest to note that Mr. Tappen had no connection with The Mutual Life Insur-ance Company except as a policy-holder.

# THE RECORD

Nos. 917 and 919 Chestnut Street.

Philadelphia, November 13, 1902.

## SNUG LEGACY FOR A WIDOW.

### MR. WATERHOUSE MADE GOOD INVESTMENT IN INSURANCE.

The late Archibald N. Waterhouse, of Philadelphia, who died suddenly last Friday, held policies amounting to \$80,000 in the Mutual Life Insurance Company, of New York. The forms of insurance under which these policies were issued were so selected that his widow will receive at once \$20,000 in cash and an annual income of \$3000 for twenty years, and if she is living at the end of that period she will receive \$60,000 in cash, making the total amount received under these policies \$140,000, on which the premiums paid by Mr. Waterhouse amounted to only \$27,492.20.

Of the total amount of this insurance \$50,000 was taken under a form of policy devised and introduced by the Mutual Life Insurance Company of New York, and known as the 5 Per Cent. Debenture Policy. These policies will pay his widow \$2500 a year for twenty years, and at the end of twenty years \$50,000 in cash if she is then living. Should she die before the expiration of that time \$50,000 will be paid her estate. On these policies ten premiums of \$1955, each had been paid.

Another policy held by Mr. Waterhouse was a 5 Per Cent. Twenty-Year Gold Bond Policy of \$10,000, on which he had paid six annual payments of \$448.70 each. This form of policy was also devised and introduced by the Mutual Life Insurance Company of New York, and in settlement of this policy the company will issue ten one-thousand dollar 5 Per Cent. Twenty-Year Gold Bonds, the income from which will be \$500 a year for twenty years. The face of the policy, \$10,000, will be paid at the end of twenty years. Mr. Waterhouse held another policy of \$20,000, on which he had paid only seven annual payments of \$750 each. Under this policy \$20,000 in cash will be paid his widow at once.

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